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An. [redacted] [redacted] filed 8-19-99

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CLAIMS

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9. ~~An electrode of a circuit element formed on a~~

5 semiconductor substrate, comprising:

a polysilicon layer;

a barrier metal formed on the polysilicon layer;

and

a metal layer formed on the barrier metal,

10 wherein the barrier metal is formed of WSi_xN_y
(tungsten silicide nitride).

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10. The electrode according to claim 9, wherein the electrode is a gate electrode of a transistor; the polysilicon layer is formed on a gate insulating film formed between a source and a drain of the transistor.

5 11. The electrode according to claim 9 or 10, wherein the metal layer is formed of W or Cu.

12. The electrode according to claim 11, wherein the gate insulating film is formed of any one of SiO_2 , SiOF , Ta_2O_5 , and CF_x .

10 13. A gate electrode of a transistor formed on a semiconductor substrate, comprising:

a gate insulating film formed between a source and a drain of the transistor;

15 a barrier metal formed on the gate insulating film; and

a metal layer formed on the barrier metal, wherein the barrier metal is formed of WSi_xN_y (tungsten silicide nitride).

20 14. The electrode according to claim 9, wherein the electrode is a capacitor electrode and the polysilicon layer is formed on an insulating film.

15. The electrode according to claim 14, wherein the metal layer is formed of any one of Al, W, and Cu.

25 16. The electrode according to claim 15, wherein the insulating film is formed of formed of any one of SiO_2 , SiOF , Ta_2O_5 , and CF_x .

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24. ~~A method of forming a gate electrode of~~
a transistor formed on a semiconductor substrate,
5 comprising

forming a barrier metal of WSi_xN_y (tungsten
silicide nitride) on a gate insulating film formed
between a source and a drain of a transistor; and
forming a conducting layer on the barrier metal.

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25. A method of forming a gate electrode of a transistor formed on a semiconductor substrate; comprising

forming a polysilicon layer on a gate insulating film formed between a source and a drain of a transistor;

forming a barrier metal of WSi_xN_y (tungsten silicide nitride) on the polysilicon layer; and

forming a conducting layer on the barrier metal.

26. The method according to claim 24 or 25, wherein the conducting layer is formed of W or Cu.

27. The method according to claim 24 or 25, wherein the gate insulating film is formed any one of SiO_2 , $SiOF$, Ta_2O_5 , and CF_x .

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